

Biospheric Sciences Branch Highlights
Code 614.4
March – April 2006

- **Science policy meetings, Science team meetings, Workshops**

****** The Biospheric Sciences Branch (Code 614.4) hosted a site visit for NASA's Carbon Cycle and Ecosystem Focus Area on March 28-30 in Building 33. Dianne Wickland, Bill Emmanuel, Ed Sheffner, and Woody Turner attended. They heard a wide variety of mission and research status presentations and Dr. Wickland provided a Headquarters update report. The Branch also conducted a visit to the Branch's soil properties labs and the roof-top Aeronet calibration facility as well as the laser labs in Code 690.

****** LDCM and Landsat Presentations to the NASA Land Cover / Land Use Change Science Team

NASA convened a meeting of its Land Cover / Land Use Change (LC/LUC) Science Team on April 14 - 16 at the University of Maryland University College Conference Center in College Park, MD. The Landsat Data Continuity Mission (LDCM) Project Scientist, Jim Irons, (Code 614.4) presented the status of the LDCM and on the impending solicitation for a USGS-sponsored LDCM Science Team.

The Deputy LDCM Project Scientist, Jeff Masek, (Code 614.4) gave a presentation on his LC/LUC-funded High Resolution Data Processing System project (known as LEDAPS). Jeff also helped lead a break-out group discussion of a white paper on NASA Earth Science Data Record (ESDR) / Measurement Requirements. At the request of NASA HQ program managers Jeff has taken a lead in developing this white paper in advance of the formation of a NASA Land Measurement Team. Eric Brown de Colstoun (Code 614.4) is also actively involved the development of the white paper. Jon Ranson (Code 614.4) co-chaired the break-out group.

Steve Covington, the USGS Landsat 7 Flight Systems Manager and International Coordinator, gave a briefing on the status of Landsat 5, Landsat 7, and the Mid-Decadal Global Land Survey. Steve supported a concurrent break-out session on the Global Land Survey. That break-out group also spent time discussing the Landsat Data Gap Study Team.

**** Steve Ungar (EO-1), Marc Imhoff (Terra/Land), Jack Xiong (MODIS/NPP), and Jeff Privette (NPP/Land) from 614.4 attended a NASA-NOAA R-O (Research to Operation) Transition Joint Working Group Meeting at College Park (April 24-26, 2006), chaired by Jack Kaye (NASA) and Chet Koblinsky (NOAA). The meeting addressed or tried to identify research and operation transition opportunities between NASA and NOAA, and with other agencies.**

- **Significant Activities**

**** Anyamba (Code 614.4) participates in crop assessment field work of Southern Africa**

Assaf Anyamba recently participated in a three week (February 16-March 12) mid-season crop assessment field work of Southern Africa covering South Africa and Zimbabwe led by Dr. Curt Reynolds as part of the ongoing research collaboration with the Foreign Agricultural Service (FAS) of USDA. The purpose of the fieldwork was to assess crop stage conditions, validate USDA yield models and satellite-derived land use/cover products from LANDSAT and MODIS. This information is used by FAS to produce monthly agricultural production estimates that drive global agricultural markets. In addition, farmers and agribusiness people were interviewed to gather detailed ground intelligence on expected production for the current growing season. We provided briefings to the US Ambassador to Zimbabwe, USAID Mission Chief and the Agriculture Consul and Attaché at the US Embassy in Pretoria, South Africa.

Anyamba also attended the Integrated Global Observations of Land (IGOL) meeting with a focus on Global Agricultural Monitoring in the Framework of GEOSS at FAO HQ in Rome, Italy, 8-10 March 2006 and contributed to drafting the IGOL theme on Satellite Requirements for Global Agricultural Monitoring. A detailed report will follow.

**** Alexei Lyapustin Code 614.4) gave a 3-hour invited course lecture at George Mason University on April 13, entitled "Atmospheric correction for MODIS: a prospective for an advanced algorithm".**

**** Jack Xiong gave a presentation at a NOAA/NESDIS/ORA/STAR Seminar on April 20, 2006 entitled: An Overview of MODIS Reflective Solar Band On-orbit Calibration.**

** Jon Ranson (614.4) attended the third Road to Mission Success Workshop held locally

** Landsat updates

There was a 5th Landsat Legacy Oral History taping March 30, 2006 at MDA Federal Inc. Rockville, MD that included the following:

Bob Porter

CIA

NASA HDQTs Director of Applications under Len Jaffe
Founder of Earth Satellite Corp. (1969-

Len Jaffe

NACA

NASA HDQTs Deputy Assoc. Administrator (1958-1981)
Communication, Meteorological and Earth (ERTS) satellite
programs

Vice-President of Computer Science Corp. (1981-1990s)

President of Earth Satellite Corp (1990s)

John de Noyer

Dept. of Defense Program Manager

USGS (critic of NASA)

on loan to NASA HDQTs for ERTS, Skylab, Nimbus, ITOS and
MSS GOES

Set up EROS Data Center (EDC) for USGS

Assoc. Prof. U. Michigan

-- Completion of successful 6-week effort by Cherie Miskey to transfer Canadian Center of Remote Sensing (CCRS) spectral simulation program (LSSAT) to GSFC, including written instruction for running the program at Goddard.

-- Writing of Landat-7 Automatic Cloud Cover Assessment (ACCA) paper with Rich Irish

-- Verification of temperature-dependence and lamp current equilibration-dependence of Landsat-7 ETM+ Internal Calibrator (IC) pulse values for reference detectors by Jennifer Sun.